



California Integrated Waste Management Board reorganizes

inside

CIWMB reorganizes 1

City of Petaluma 3

New waste study begins 4

BayROC wins EPA award 4

Sacramento Airport recycling program 5

Climate change— Greenhouse gas emissions 6

Model green purchasing programs 12

Blue Wrap 21

Asphalt recycling 26

Editor's note 27

In the Spring/Summer 2007 Edition of *infoCycling*, we announced that the California Integrated Waste Management Board (CIWMB) was undergoing a major reorganization that may change either the way you interact with the CIWMB or our staff.

The reorganization was effective July 1, 2007. You may have already begun to see new faces and meet new CIWMB staff. This is a result of new assignments and changes in how we are conducting business; however, we want to reassure you we will continue to provide the best possible service to you. We do recognize that there will be a period of transition for you, as well as for ourselves, as we work together to take advantage of the benefits of our new structure, and make our program delivery more effective.

The reorganization folds the previous four program divisions into two larger programs (Waste Compliance & Mitigation Program and Sustainability Program) that reflect the dual missions of the CIWMB. These two critical missions are:

1. Protecting public health and safety, and the environment, through our solid waste management programs.
2. Moving Californians toward a more sustainable future through waste prevention, resource management, and market development.

The reorganization provides for more effective delivery of services and assistance to our primary customers in local governments, businesses, and the public, while maintaining California's high environmental standards. The new structure allows CIWMB staff to respond more quickly and comprehensively to local needs and to foster cooperative efforts between businesses and local government programs.



infoCycling is published four times a year by the California Integrated Waste Management Board, 1001 I Street, P.O. Box 4025, Sacramento, CA 95812-4025.

Phone: (916) 341-6240

E-mail:

twebb@ciwmb.ca.gov

Editor, Tracy Webb

The California Integrated Waste Management Board (CIWMB) does not discriminate on the basis of disability in access to its programs. CIWMB publications are available in accessible formats upon request by calling the Public Affairs Office at (916) 341-6300. Persons with hearing impairments can reach the CIWMB through the California Relay Service, 1-800-735-2929.

Copyright © 2008 by the California Integrated Waste Management Board. All rights reserved. This publication, or parts thereof, may not be reproduced in any form without permission.

Publication #342-08-001
January 2008

Copies of this document originally provided by CIWMB were printed on recycled paper containing 100 percent postconsumer fiber.



Driving principles

The **first driving principle** was integrating the CIWMB's missions. For example, staff and related resources devoted to implementing the CIWMB's regulatory mission are now aligned under one program director. Similarly, resources devoted to fulfilling the CIWMB's sustainability mission are aligned under one program director.

The **second driving principle** was to transition the focus of staff's activities from the statewide level to a more market- or locally-based focus. CIWMB staff will include activities providing direct assistance with problem-solving, facilitating cooperative efforts, and support in all relevant areas at the local level. Furthermore, each jurisdiction will have a single point of contact rather than different contacts from multiple CIWMB programs. More staff are now on the "front lines," delivering resources and tools where local market development efforts demand assistance. The CIWMB believes that program delivery is much more effective at the local level, where efforts can be integrated, comprehensive, and market-based.

The **third driving principle** of the reorganization was to maintain a strong statewide perspective and

resource base. While the second principle targets efforts on regional or local levels, a cadre of technical and policy experts who can supplement local program delivery must be maintained. For instance, when food waste composting expertise is needed to help a jurisdiction, expertise is available to supplement the "front-line" staff assigned to that community. In addition, working with State agencies such as the California Department of Transportation and the Department of General Services, and issues that cross borders such as manufacturer responsibility and climate change, will continue to require a broader statewide effort.

The **final driving principle** for the reorganization was to consolidate activities to maximize staff skills and streamline core functions. This resulted in the consolidation of grants administration, website functions, and database management.

Program responsibilities

We now have two new Program Directors, Howard Levenson, Sustainability Program and Ted Rauh, Waste Compliance and Mitigation Program, who will ensure that staff continue to work closely with you and provide assistance where and when it is needed.

Continued on next page

Strategic directives

Details of the CIWMB's strategic directives, which were adopted on February 13, 2007, are available on the Strategic Directives web page www.ciwmb.ca.gov/BoardInfo/StrategicPlan/.

Sustainability Program

See the CIWMB's Program Responsibilities web page (www.ciwmb.ca.gov/BoardInfo/ProgramResp/Sustainable/) for a description of the responsibilities of the Sustainability Program. A list of CIWMB Sustainability Program Jurisdiction Contacts, State Agency Contacts, Recycling Market Development Zones (RMDZ) Contacts, and Local Enforcement Agency (LEA) Contacts are available on the Local Assistance and Market Development contacts page at www.ciwmb.ca.gov/OLA/contacts.asp. In addition, a list of staff in the Sustainability Program divisions, branches, and sections is available at www.calepa.ca.gov/StaffDirectory/org.asp?BDO=3&TIER1=SUS.

Waste Compliance and Mitigation Program

See the CIWMB's Program Responsibilities web page (www.ciwmb.ca.gov/BoardInfo/ProgramResp/Compliance/) for a description of the responsibilities of the Waste Compliance and Mitigation Program. A list of staff in the Waste Compliance and Mitigation Program divisions, branches, and sections is available at www.calepa.ca.gov/StaffDirectory/org.asp?BDO=3&TIER1=WCMP.

The reorganization was planned and undertaken after thoughtful, careful analysis of how we might better achieve our dual missions, and be more effective in our delivery of services. The CIWMB Board Members, the executive team, and CIWMB staff hope that you will give us your support and patience as we work through this transition.

City of Petaluma—Green building program

The City of Petaluma's Green Team features monthly articles on green living and sustainability in the Petaluma Argus Courier. The February 21, 2007, article titled *City is dedicated to green living*

(www1.arguscourier.com/apps/pbcs.dll/article?AID=/20070221/COMMUNITY/70221003) provides a brief history of the creation of the green building program, which included the Green Team. Information on the Green Team's future plans is also discussed.

New waste study begins!

The California Integrated Waste Management Board (CIWMB) has launched a new statewide waste characterization study. The new study will use methodologies and strategies similar to the Statewide Waste Characterization Study conducted in 2003/2004, focusing on characterizing the disposed waste stream for three main disposal sectors:

- Residential
- Commercial
- Self-hauled

Sampling of these waste streams will be conducted at 25 randomly selected disposal sites around the state and accomplished over the four seasons in 2008. A total of 750 samples will be collected from the three sectors and sorted into approximately 85 specific material types.

Waste characterization data can be used in many ways. For example, it can provide information about the amount of materials potentially available for recycling or composting, the effectiveness of existing programs, and sources of materials. In addition, some types of data can be used to estimate waste stream characteristics in place of sampling studies. For example, the CIWMB's waste characterization database combines waste stream information for specific business types with local business sector data to provide proxy information on a city's commercial waste stream.

If you have questions regarding this new study or any of the CIWMB's previous waste characterization studies, you may contact Nancy Carr at (916) 341-6216 or ncarr@ciwmb.ca.gov, or Tom Rudy at (916) 341-6229 or trudy@ciwmb.ca.gov.

Bay Area Recycling Outreach Coalition wins an EPA Environmental Award

The Bay Area Recycling Outreach Coalition (BayROC) was honored with an EPA Environmental Award for their 2006 Stop Junk Mail Campaign (www.StopJunkMail.org). Check out BayROC's website

www.BayAreaRecycling.org for details on the award and information on how you can use the Stop Junk Mail Campaign and other BayROC award winning campaigns – Free of charge!

Sacramento International Airport new terminal/ concourse recycling program

In April 2007, the Sacramento International Airport initiated a mixed recycling program to collect newspapers, magazines, white and colored paper, cardboard, aluminum cans, glass, and plastic bottles. Recycling containers are located next to each trash bin throughout the airport, inside the terminal and concourses. Recycling dumpsters located outside of the airport are also available for use

by custodians and others. Mixed recyclables collected from the inside recycling containers and outside dumpsters are placed in on-site compactors that are emptied bi-weekly. (See the photos below.)

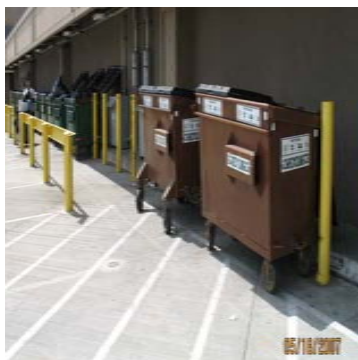
To showcase its program, the airport put together a presentation, which is available on the California Integrated Waste Management Board's (CIWMB) website at www.ciwmb.ca.gov/Venues/Implement/Airport.pdf.

If you have any questions about the airport's recycling program, contact Yasmin Satter at (916) 341-6262 or ysatter@ciwmb.ca.gov, or contact Ryan Bailey, Sacramento County at (916) 649-0173 or baileyr@saccounty.net.

Photos in the article appear courtesy of Bill Akin.



Mixed Recycling Containers



Mixed Recycling Dumpsters



Mixed Recycling Compactor

Climate change— Greenhouse gas emissions

According to the U.S. Environmental Protection Agency's Greenhouse Gas Emissions web page (www.epa.gov/climatechange/emissions/index.html), gases that trap heat in the atmosphere are often called greenhouse gases. Some greenhouse gases such as carbon dioxide occur naturally and are emitted to the atmosphere through natural processes and human activities. Other greenhouse gases (e.g., fluorinated gases) are created and emitted solely through human activities. The principal greenhouse gases that enter the atmosphere because of human activities are:

- Carbon Dioxide (CO₂)
- Methane (CH₄)
- Nitrous Oxide (N₂O)
- Fluorinated Gases

What is California doing about greenhouse gas emissions?

Check out the State of California Climate Change Portal at <http://climatechange.ca.gov/>. The portal offers links to a host of information on climate change, including greenhouse gases. In addition, highlighted in this article, you will find two examples of cities in California (Pasadena and Palo Alto) making monumental strides to work on the greenhouse gas

emissions issue. This article also includes information about the Institute for Local Government (ILG).

City of Pasadena

Transportation infrastructure and modes, energy and water supply systems, building usage, construction, and waste elimination—these are all ongoing demands of cities. These demands are also primary sources of greenhouse gas (GHG) emissions, which pose the greatest risk to a city's health, economy, and environment.

Leading scientists around the world agree that climate change is a reality and an issue of global scale, the effects of which will be felt throughout our communities. Local actions alone cannot solve the problem, but they can make a significant contribution towards change. Among the vanguard of progressive cities in the state, Pasadena has shown its serious commitment in addressing climate change by taking the following actions:

- Adoption of a Green City Action Plan
- Adoption of an Environmental Charter
- Endorsement of the United Nations Green Cities Declaration and Urban Environmental Accords

Continued on next page

Climate change—Greenhouse gas emissions, continued from page 6

- Endorsement of the US Conference of Mayors Climate Protection Agreement
- Adoption of an Ordinance Creating an Environmental Advisory Commission
- Adoption of a Green Building Program

The Green City Action Plan is the city's blueprint for defining goals and initiating efforts to improve sustainability at the local level. Adopted in September 2006, it serves as a six-year plan with 21 specific goals to:

- Reduce greenhouse gas emissions
- Conserve energy and water
- Reduce waste
- Tailor urban design
- Protect natural habitats
- Improve transportation options
- Reduce risks to human health

All the goals outlined in the Green City Action Plan impact climate change, with the city successfully having achieved 7 of the 21 goals. Six of these goals contribute significantly to the reduction of greenhouse gas emissions.

1. Increasing the use of renewable energy to meet 10 percent of the city's peak electric load within seven years
2. Implementing "user-friendly" recycling and composting programs, with the goal of reducing by 25 percent per capita solid waste disposal to

landfills and incineration in seven years

3. Mandating a green building rating system
4. Advancing higher density, mixed use, bikeable and disabled accessible neighborhoods
5. Protecting critical habitat corridors
6. Expanding affordable transportation coverage to within ½ kilometer of all city residents in ten years

Building construction and operations account for over 30 percent of the greenhouse gas emissions in the United States. Pasadena was one of the first California cities to mandate green building standards for private buildings, requiring all commercial construction over 25,000 square feet to follow the Leadership in Energy and Environmental Design (LEED) guidelines which include requirements for reducing energy consumption and greenhouse gas emissions.

The city's Green Building Program is a primary example of how local jurisdictions can lead the way to a more responsible way of developing, addressing the environment and climate change through thoughtful and aesthetic green building design and quality architecture.

The city has implemented a broad range of innovative measures to

Continued on page 8

All of the goals outlined in Pasadena's Green City Action Plan impact climate change.

Climate change—Greenhouse gas emissions, continued from page 7

reduce greenhouse gas emissions in their municipal operations and throughout the community. These measures include:

- Linking land use and transportation planning with open space systems for increased recreation and ecological reconstruction opportunities
 - Ensuring new projects enhance the pedestrian and transit environment
 - Adopting a Bicycle Master Plan to implement a citywide bikeway system, and installing over 250 new bicycle racks to encourage the public to circulate within the city without the use of cars
 - Becoming a *Climate Action Leader*, by measuring, certifying, and reporting GHG emissions to the California Climate Action Registry and the public
 - Installing occupancy sensors and automatic temperature control systems in city-owned buildings
 - Promoting energy conservation through campaigns targeted at residents and businesses
 - Installing energy efficient traffic lights
 - Offering incentives for solar panel installations in the community
 - Promoting clean energy use through green power purchasing
 - Requiring construction and demolition debris be diverted from landfills
 - Purchasing hybrids and compressed natural gas (CNG) fleet vehicles
 - Initiating the installation of a CNG fueling station for City fleet vehicles (*funded by the Mobile Source Reduction Committee - MSRC*)
 - Maintaining 96 percent tree canopy coverage on all sidewalk planting sites
 - Creating incentives for using public transit
 - Initiating a green procurement strategy
 - Promoting Green Technology incubator businesses
- Pasadena has received honors and acclaim for these efforts including:
- 2004 Most Bicycle Friendly City Award by the Los Angeles County Bicycle Coalition for the implementation of bikeways throughout the city
 - One of the top five “cleantech” cities in the nation for its use of innovative, environment-friendly
 - Six Tree City USA Growth Awards and five Tree Line City USA Utility Awards
- The City of Pasadena is striving to reduce its contribution to climate change. The policies and programs the city has adopted,

Continued on next page

Climate change—Greenhouse gas emissions, continued from page 8

implemented, and committed to represent the city's dedication to ensure a sustainable environment for generations to come.

For more information on Pasadena's climate change policies and programs, visit www.ci.pasadena.ca.us/permitcenter/GreenCity/Home_Green.asp or contact Ursula Schmidt, Environmental Sustainability Programs, City of Pasadena at 626-744-6729 or uschmidt@cityofpasadena.net.

City of Palo Alto

Climate change is an important topic within the City of Palo Alto. The city has been actively working toward the reduction of greenhouse gas emissions through a number of activities within the Climate Protection arena.

Palo Alto is a member of Sustainable Silicon Valley, ICLEI Cities for Climate Protection Campaign and a signatory to the U.S. Mayors' Climate Protection Agreement. Palo Alto is the second city in California to certify its greenhouse gas emissions inventory with the California Climate Action Registry earning "Climate Action Leader" status. In addition, the city was the first in California (and fourth in the country) to be recognized by the US EPA as a "Green Power Community" in December of 2006.

Palo Alto Regional Water Quality Control Plant (RWQCP) completed a pipeline and conversion project to burn methane gas from the Palo

Alto Landfill in its sludge incinerator, saving natural gas, money, and reducing CO₂ emissions. The methane gas is now put to productive use instead of being flared. After several months of testing and start-up, the landfill gas is now utilized continuously.

The project is estimated to reduce CO₂ emissions by 1,350 tons per year at over 33 percent with the reduction of natural gas use at the RWQCP, thus saving over \$250,000 annually. The project is highlighted in the SSV 2005 Annual Report, available at www.sustainablesiliconvalley.org/.

The City of Palo Alto has already begun to move forward on climate protection measures. For example:

- On March 5, 2007, the Palo Alto City Council adopted Climate Protection as one of its milestones and 2007 Top 4 Priorities.
- The Mayor's Green Ribbon Task Force on Climate Protection, formed in March 2006, was a group of about 50 community members who collaborated to develop a list of ideas and recommendations that the city government and the community at large can do to address global warming. For more information, go to www.cityofpaloalto.org/knowzone/agendas/grtf.asp.

Continued on page 10

Climate change—Greenhouse gas emissions, continued from page 9

Palo Alto's Climate Protection Plan was approved by City Council at their December 3, 2007 meeting.

- In December 2006, Palo Alto developed a Zero Waste Operational Plan (www.cityofpaloalto.org/depts/pwd/recycle/zero_waste_program.asp) that shows reducing waste generated within their community can reduce greenhouse gasses. Also in this plan, in the recommendations section, there is a plan to conduct a greenhouse gas audit to fully measure the impact of its current and planned waste prevention and recycling programs. The Zero Waste Operational Plan was presented to the Palo Alto City Council in September 2007 for approval. The "Our Green City" web pages (www.cityofpaloalto.org/environment/our_green_city.asp) provide information about the city's Zero Waste efforts as well as other sustainability topics.
- Palo Alto developed a Climate Protection Plan. The plan was approved by City Council at their December 3, 2007 meeting.
- The City is currently working on a greenhouse gas emissions policy.
- Council approved new Objectives and Guidelines for the Long-term Electric Acquisition Plan (LEAP), which increases renewable energy targets from 20 percent to 33 percent by 2015 and adds a new guideline to develop a Climate Action Plan for utilities.
- Staff has proposed a ten-year energy efficiency plan that aims to redouble efforts to pursue all cost-effective energy efficiency opportunities as the top-priority energy resource.
- The RWQP completed a lifecycle cost and greenhouse gas emissions assessment of water disinfection technologies showing that ultraviolet disinfection has 70 percent lower lifecycle carbon dioxide emissions than using chlorine.
- The Bike Station reopened at the Palo Alto Depot making it easier to combine bicycling with using the train or buses.
- A green building kiosk has been installed at the Development Center providing green building information for all customers doing business there.
- Staff has recommended adding a green building checklist requirement as one of the first steps in implementing a green building program.
- The city co-sponsored and promoted the Step It Up 2007 Silicon Valley event that took place on April 14, 2007.

Continued on next page

Climate change—Greenhouse gas emissions, continued from page 10

For more information on Palo Alto's climate change programs and policies, contact Karl E. Knapp, Ph.D., Senior Resource Planner, City of Palo Alto Utilities at (650) 329-2309 or Karl.knapp@cityofpaloalto.org or contact Wendy Hediger, Recycling Coordinator, City of Palo Alto at (650) 496-5912 or wendy.hediger@cityofpaloalto.org.

New program to address climate change

The Institute for Local Government (ILG) is the non-profit, 501(c)(3) research arm of the League of California Cities and the California State Association of Counties. The ILG is working with local jurisdictions as part of ILG's new Climate Change Program, California Climate Action Network (CCAN). The goals of the program are:

1. To create incentives for local officials to steadily raise their aspirations in addressing the causes and consequences of climate change at the local level, by recognizing efforts to implement climate action best practices in their own operations and throughout the community; and

2. To provide quality information and access to specific strategies and resources local officials can apply in individual communities to make a difference on climate change issues.

A key part of the program is a three level recognition program for those cities and counties that take meaningful and measurable steps to reduce greenhouse gas emissions in their jurisdictions. CIWMB staff has been working as Technical Advisors to ILG in the development of best management practices in support of the recognition program. For more information on the CCAN program, please visit the ILG's climate change website at www.ca-ilg.org/climatechange.

California Integrated Waste Management Board contact information:

For more information on climate change, including the reduction of greenhouse gas emissions in California, contact Clark Williams of the California Integrated Waste Management Board (CIWMB) at (916) 341-6488 or clarkw@ciwmb.ca.gov.

Jurisdictions with model green purchasing programs

Green purchasing, also called environmentally preferable purchasing (EPP), is the procurement of goods and services that have a reduced effect on human health and the environment when compared with competing goods and services serving the same purpose.

EPP is about smart purchasing – buying products that give you the best value; are long lasting, high-quality, safer, less toxic, reusable, easy to recycle; material, water, and energy efficient; and minimize our impact on California's natural environment.

This article highlights the following four jurisdictions' model green purchasing programs.

- Alameda County
- San Francisco
- Santa Monica
- Ventura County

Alameda County— StopWaste.Org *Environmental Preferable Purchasing Model Policy* adoption and implementation

StopWaste.Org is the Alameda County Waste Management Authority and the Alameda County Source Reduction and Recycling

Board operating as one public agency. StopWaste.Org passed an *Environmentally Preferable Purchasing (EPP) Model Policy* for their agency in 2003. While the public agency has only 35 employees, they are using their internal *EPP Model Policy* for most of their purchases.

StopWaste.Org has helped their member agencies (the 14 cities in Alameda County, two sanitary districts covering some unincorporated parts of the county, and the County of Alameda General Services Agency) pass EPP policies or implement EPP based on StopWaste.Org's *EPP Model Policy* and the *EPP Implementation Guidance for the Model Policy*.

Five jurisdictions and a sanitary district in Alameda County have passed EPP Policies based on StopWaste.Org's *EPP Model Policy*.

- Castro Valley Sanitary District
- City of Albany
- City of Berkeley
- City of Dublin
- City of Oakland
- City of San Leandro

"We thought the change would cost more money and take more time, and in fact, found quite the opposite," says Rene Cardinaux, City of Berkeley Public Works.

Continued on next page

EPP Model Policy and EPP Implementation Guidance for the Model Policy

StopWaste.Org developed an *EPP Model Policy* in 2003 and did comprehensive updates to the policy in 2005 and 2006. They asked technical experts in transportation, energy efficiency, water conservation, paper production, toxics, green building, and landscaping to make sure product standards were up-to-date and accurate.

The *EPP Model Policy* was reviewed by national EPP experts and local environmental and purchasing staff to make sure it was comprehensive, complete, and practical.

The EPP Implementation Guidance for the Model Policy that accompanies and supports the *EPP Model Policy* offers definitions, websites for product standards and resources, and product examples. The Alameda County General Services Agency, UC Berkeley, Livermore, and Fremont are using the implementation guidance and other resources to put EPP into practice in their organizations.

StopWaste.Org helps businesses and public agencies

StopWaste.Org offers Alameda County businesses and agencies free assistance for environmentally friendly purchasing.

The proof?

One good example is a simple shift to high quality recycled copy paper, which can result in big environmental savings.

One business switched from the 6.5 tons of non-recycled copy paper they used each year to 30 percent recycled-content paper, saving 47 trees and enough energy to power the average home for four months. The change also reduced greenhouse gases by enough carbon equivalents to power a car for four and a half months, and reduced air particulates that cause health risks such as asthma by 10 pounds, or almost as much as the carbon an urban bus emits in an entire year.

What's the cost?

In this example, the recycled copy paper they switched to was the same price as the non-recycled. Copier paper prices vary based upon a number of factors, such as the amount of paper purchased, type and timing of delivery, and often the recycled content. Copier paper prices often rise as recycled content increases. However, some organizations have been able to purchase recycled copier paper for the same price as virgin paper, especially when they are able to order in bulk.

Some recycled-content products (RCP), such as janitorial paper products, corrugated packaging, padded mailers, latex paint, compost, mulch, remanufactured toner cartridges, and many others, are priced the same as or less than

Continued on page 14

StopWaste.Org offers Alameda County businesses and agencies free assistance for environmentally friendly purchasing.

Model green purchasing programs, continued from page 13

their non-recycled counterparts. Some durable RCPs, such as recycled plastic lumber and rubberized asphalt, often cost more initially than comparable non-RCPs; however, they have lower overall costs because they are more durable and require less maintenance.

Information and resources

StopWaste.Org has developed several fact sheets on how and where to buy environmentally preferable and recycled content products in Alameda County:

- Environmentally Preferable Janitorial Cleaning Products for Commercial Applications
- How to Buy Environmentally Preferable Office Products in Alameda County
- How to Buy Environmentally Preferable Nonpaper Office Products in Alameda County
- How to Buy Remanufactured Toner Cartridges in Alameda County
- How to Buy Environmentally Preferable Janitorial Paper Supplies in Alameda County
- How to Buy Recycled Content and Park and Recreation Products in Alameda County
- How to Buy Recycled Content Transportation Products in Alameda County
- Using Rechargeable Batteries

StopWaste.Org's *A Resource Guide for Environmentally Preferable Products* lists various types of products, such as:

- Office supplies and equipment
- Food service and building maintenance products

The guide also lists environmental attributes, the source of the associated "green" standard on which the environmental attribute is based, and links to further information.

Other StopWaste.Org Resources

- The Bay-Friendly Landscaping and Gardening website (www.bayfriendly.org) offers product ideas, bay-friendly gardening ideas for residents, and sustainable practices for landscaping professionals.
- The Green Building Home website (www.BuildGreenNow.org) provides construction-related products and information for "Green Building."
- Read all about how StopWaste.Org put their EPP know-how to work, including green building and bay-friendly landscaping, in their newly renovated office by downloading *1537 Webster Street: A Green Renovation in Downtown Oakland* at www.stopwaste.org/docs/1537webster.pdf.

Continued on next page

The expert free assistance, information, and resources StopWaste.Org is offering can be accessed by visiting www.StopWaste.Org/EPP. Download the *EPP Model Policy, EPP Implementation Guidance for the Model Policy, Fact Sheets, A Resource Guide for Environmentally Preferable Products*, and other EPP resources.

"Agencies and companies have a huge number of options. It's not easy for purchasers to determine just how green or environmentally friendly products are, which is why we've put together some easily digestible information on making purchasing decisions that make the most sense for an individual company or jurisdiction," says Rachel Balsley, Program Manager with StopWaste.Org.

Contact information

If you have questions about StopWaste.Org's EPP program, contact:

- Rachel Balsley, Program Manager for StopWaste.Org at (510) 891-6500 or rbalsley@stopwaste.org
- Beth Eckl, EPP Consultant to StopWaste.Org at (925) 838-2731 or Eckl@sbcglobal.net
- Delyn Kies, EPP Consultant to StopWaste.Org at (415) 209-0321 or delynk@comcast.net

San Francisco

In 2005, San Francisco (city and county) passed its Environmentally Preferable Purchasing Ordinance mandating that their departments

purchase environmentally friendly products when alternatives have been identified. The purchasing ordinance is built upon the framework of San Francisco's Precautionary Principle, which requires their operations to "take anticipatory action to minimize harm" by using the best available science to identify safer, cost-effective alternatives. Detailed information on the purchasing ordinance and the Precautionary Principle is available at www.municode.com/Resources/gateway.asp?pid=14134&sid=5.

Alternatives assessment

The key concept behind implementation of the Precautionary Principle is the alternatives assessment. The alternatives assessment compares the risks and benefits of all available alternatives, and preference is given to the alternative that minimizes harm without sacrificing effectiveness.

When evaluating potential alternatives, San Francisco considers anticipated costs even if such costs are not reflected in the initial price. The anticipated costs could include raw materials, manufacturing, transportation, use, cleanup, eventual disposal, and health costs.

Short- and long-term benefits are considered when making decisions. Most importantly, San Francisco consults extensively with end users to understand their constraints and identify products that perform well.

Continued on page 16

In 2005, San Francisco (city and county) passed its Environmentally Preferable Purchasing Ordinance.

Selection of product categories

San Francisco started by reviewing and categorizing government purchases and developing a scorecard

(www.sfenvironment.org/downloads/library/valuatingproductcategories.pdf) to rank the environmental and social impacts of key products. The scoring helped identify a set of ten "targeted product categories."

These are the broad categories of products that San Francisco considers to be its highest priority for implementing environmentally friendly purchasing specifications. More information on these targeted product categories are available at

www.sfenvironment.org/our_programs/topics.html?ssi=9&ti=22.

For targeted products—with input from end users and the public—San Francisco staff develop product specifications, screen products, and develop an approved alternative products list.

When enough alternatives exist, departments may be required to purchase only products on the approved list. A waiver system exists for cases when alternatives will not work. More information on San Francisco's approved alternative products list is available at www.sfenvironment.org/our_programs/interests.html?ssi=9&ti=22&ii=123.

Benefits and lessons learned

Since San Francisco began its green purchasing activities over 10 years ago, they have:

- Introduced more than 1,000 zero- or low-emission vehicles to their fleet
- Conserved 6,800 trees and more than half-a-million gallons of water each year by purchasing recycled content paper
- Cut municipal pesticide use by nearly two-thirds
- Increased their purchase of low-mercury linear fluorescent lamps from three percent to 100 percent
- Increased the purchase of rechargeable batteries for office uses

To date, San Francisco has added the following environmental attributes to its contracts:

- Ban on arsenic-treated wood for most uses
- Ban on non-rechargeable batteries for certain non-emergency uses
- Biodegradable food containers
- Less-toxic janitorial cleaning solutions
- Lower mercury, higher-efficiency, long-life light bulbs/lamps

Continued on next page

Model green purchasing programs, continued from page 16

- Recycled content and processed chlorine-free janitorial paper products
- Recycled office paper

San Francisco is proud of its successes and has much to share with other agencies looking to develop green purchasing programs. However, San Francisco feels that there is much to learn still. For example, over the next year they will develop a better understanding of the strengths and weaknesses of the approved list approach. In addition, they will be improving their lamps contract to incorporate what they learned from creating and using their first environmentally preferable lamps contract two years ago.

"Our experience has taught us how critical it is to have an on-going dialogue with the people actually using the products, and to base specifications on the best science available," summarizes Dr. Chris Geiger, Green Purchasing Program Manager.

Contact information and resources

For more information on San Francisco's Green Purchasing Program, contact Dr. Chris Geiger, Green Purchasing Program Manager, San Francisco Department of the Environment at (415) 355-3759 or Chris.Geiger@sfgov.org. In addition, an abundance of information is available on the San Francisco website at www.sfenvironment.org.

Santa Monica

The City of Santa Monica has been actively purchasing environmentally preferable products, such as recycled content, energy efficient, and less toxic chemical products since the early 1990s. With the adoption of the Santa Monica Sustainable City Plan (<http://santa-monica.org/epd/scp/>) in 1994, the city council highlighted environmentally preferable purchasing as one of the Sustainable City Plan's guiding principles.

Santa Monica has also developed an array of environmentally and socially responsible procurement initiatives. These initiatives are applicable to city programs and services in all areas including:

- Renewable energy
- Recycled content paper
- Alternative fueled vehicles
- Energy efficient office electronics
- Other product and service categories

The city also advocates for and assists other local agencies, businesses, and residents in adopting sustainable purchasing practices.

Staff from the Purchasing Section, Environmental Programs Division, and other city stakeholders work closely together to identify environmentally preferable

Continued on page 18

*In 2007,
Santa Monica
developed
two new
indicators for
its
Sustainable
City Plan.*

Model green purchasing programs, continued from page 17

products and services. These products are evaluated based on:

- Performance
- Cost
- Availability
- Environmental and human health impact

Where possible, the city awards bids and contracts based on "best value," not lowest priced bids.

What's new?

Santa Monica is taking an active role in aligning itself with organizations, such as the Responsible Purchasing Network (www.responsiblepurchasing.org) and the California Product Stewardship Council (www.calproductstewardship.org).

By doing this, Santa Monica is better able to leverage its resources and elevate its sustainable procurement goals through networking and legislation.

In 2007, the city developed two new indicators for its Sustainable City Plan. These indicators are "sustainable procurement" and "the reduction of the quantity and toxicity of hazardous materials purchased for city operations." Both indicators have specific targets enabling the city to decide on purchases even more closely aligned with the Sustainable City Plan.

The goal is to institutionalize sustainable procurement for twenty product categories and services by 2010 from a 2005

baseline. The following product categories have been identified as priority for 2007:

- Carpet
- Cleaning products
- Computers
- Copy paper
- Diesel
- Graffiti removers
- Fluorescent lighting
- Food packaging
- Janitorial paper supplies
- Office supplies
- Pesticides

What's next?

In winter 2008, the city will introduce an illustrative environmentally preferable purchasing (EPP) best practices website. The objective is to introduce and promote sustainable procurement to people and organizations via a virtual tour.

Where can I get more information?

For information on Santa Monica's EPP program, contact Karl Bruskotter at (310) 458-2255 or Karl.Bruskotter@SMGOV.NET. In addition, information on Santa Monica's sustainable city plan and sustainability in general is available on the City of Santa Monica's Environmental Programs Division website at www.smgov.net/epd/.

Continued on next page

Model green purchasing programs, continued from page 18

Ventura County's Green Purchasing Program focuses on the purchase and use of environmentally preferable products.

The city continues to enjoy success in greening its purchases. Organizations must continually update their priorities and goals to ensure that resources and money are spent on procurement strategies that have the most significant benefit to human health and the environment. In addition, organizations need to consider cost, performance, and availability.

For more information on legislation, go to www.caproductstewardship.org/state/index.html. Comprehensive purchasing guides are available to members of the Responsible Purchasing Network (RPN), www.responsiblepurchasing.org. The guides contain lists of products that meet stated environmental criteria, making it easier to find green products.

Ventura County

On March 27, 2007, the Ventura County Board of Supervisors reaffirmed its 2002 commitment to the State of California's Green Procurement Policy (www.ciwmb.ca.gov/EPP/LawPolicy/) and integrated the adopted policy into the county Administrative Manual for effective practice by all county agencies, departments, and facilities. See www.wasteless.org/8_1_4Greenpolicy2007.htm to read Ventura County's Green Purchasing Policy.

Ventura County's Green Purchasing Program is administered primarily by the Procurement Services Division of the General Services Agency with

support from the Integrated Waste Management Division of the Public Works Agency.

The county's Green Purchasing Program focuses on the purchase and use of environmentally preferable products. These products have a reduced negative effect on human health and the environment when compared with competing products serving the same purpose.

Such products may include, but are not limited to, those which contain postconsumer recycled-content material, minimize waste, conserve energy or water, and/or reduce the amount of toxics disposed or consumed by county employees.

The centerpiece of the Green Purchasing Program is an agreement between the county and a major office supply company. Since 2004, their supplies catalog has been used almost exclusively by employees when ordering copy paper, stationery, and general office supplies.

The contract provides the county with a monetary incentive to "Close the Loop" by offering low-priced generic, and/or "House Brand," recycled-content alternatives to more expensive, virgin, or "Name Brand," products listed in the catalog. The county also receives "Special Order/Volume Discounts" when large quantities of environmentally preferable products are ordered.

Continued on page 20

Model green purchasing programs, continued from page 19

Ventura County's Green Purchasing Program includes the purchase and use of:

- Environmentally friendly janitorial supplies.
- Environmentally friendly solvents in fleet vehicles & equipment.
- Hybrid vehicles (58 sedans and 8 Mini SUV's).
- Recycled-content carpet tile
- Recycled-content copy paper
- Recycled-content office furniture, desktops, wall partitions, and chairs
- Recycled-content sanitary papers
- Recycled-content stationery and envelopes
- Remanufactured toner cartridges
- Re-refined motor oil
- Retread tires for selected maintenance vehicles

Contact information and resources

For more information about the County of Ventura's Green Purchasing Program, visit the Integrated Waste Management Division's Wasteless.org website (www.wasteless.org/8_1Greenpurchase.html), or contact Frank Long in the Procurement Services Division at (805) 654-3756 or frank.long@ventura.org.

State of California

The Environmentally Preferable Purchasing Best Practices Manual (Manual) is available on the Green California website at www.green.ca.gov/EPP/Introduction/default.htm to help you make informed purchases that achieve both economic and environmental balance and assist your department with meeting California's purchasing goals (Public Contract Code sections 12400-12404, available at www.leginfo.ca.gov/calaw.html).

The manual covers 35 products categories along with other chapters covering how to access state contracts at www.green.ca.gov/EPP/sources/local.htm and how to find green products on state contracts at www.green.ca.gov/EPP/sources/Products.htm. For more information about the Manual, contact the Department of General Services at green@dgs.ca.gov.

What information does the CIWMB provide?

If you would like more information on Green Purchasing, a list of Local Assistance and Market Development Division staff in the Sustainability Program is available at www.ciwmb.ca.gov/OLA/contacts.asp. In addition, the following web pages provide a wealth of information relating to RCPs.

Continued on next page

Model green purchasing programs, continued from page 20

- Environmentally Preferable Purchasing website, (www.ciwmb.ca.gov/EPP/)
- Buy Recycled Programs (www.ciwmb.ca.gov/BuyRecycled/)
- Recycled-Content Product Directory (www.ciwmb.ca.gov/RCP/)
- Green Procurement Policies (www.ciwmb.ca.gov/BuyRecycled/Policies/)
- Recycle Store (www.ciwmb.ca.gov/RecycleStore/)

The CIWMB also assists procurement staff from the Legislature and all State agencies in establishing practices for purchasing recycled-content products and helping State agencies meet the requirements of the State Agency Buy Recycled Campaign (www.ciwmb.ca.gov/BuyRecycled/StateAgency/).

Nothing in the article is intended to be an endorsement of a particular company or process by the CIWMB.

Reducing Blue Wrap waste at medical centers

This is the fourth and final article in a series of articles bringing you information about increased plastic film diversion opportunities and programs for local government, industry, businesses, environmental stakeholders, and the general public.

The first article, *Collaborative process moves to implementation of plastic film diversion projects* is available in the Fall 2006 Edition of *infoCycling*. The second article, *Agricultural plastic films* is available in the Winter/Spring 2007 edition of *infoCycling*. The third article *AB 2449—Statewide plastic bag recycling program* is available in the Spring/Summer 2007 edition of *infoCycling*.

These articles are accessible on the CIWMB website: <http://www.ciwmb.ca.gov/LGLibrary/infoCycling/>. This article provides information on “Blue Wrap” recycling opportunities in hospitals/medical centers. Blue Wrap recycling programs at three medical centers are highlighted below.

What Is Blue Wrap?

Blue wrap is a highly specialized polypropylene plastic product used as a durable, sterile protective cover to wrap and store sterilized instruments trays in the operating rooms. In this article, three medical centers are highlighted showcasing their efforts to divert or reduce the amount of Blue Wrap going into California landfills.

Continued on page 22

Mills-Peninsula Health Services—Blue Wrap reduction

In December 2006, the Mills-Peninsula Health Services (MPHS) Peninsula Medical Center campus in Burlingame made a switch from using Blue Wrap to hard cases for containing instruments and supplies for sterilization prior to use in surgery. They are currently only using Blue Wrap for wrapping orthopedic joints.

According to the Sutter Health Contracts Office, Peninsula Medical Center used an estimated 14,475 pounds of Blue Wrap during 2006 at a cost of \$35,962. MPHS spent \$34,987 to purchase steel hard cases (see the photo below) that have allowed them to reduce Blue Wrap use by an estimated 70 percent.



Hard cases stored at Peninsula Medical Center

Photo in the article appears courtesy of Jack McGurk.

The following advantages were noted by the supervisor of the Central Sterile Processing when using the hard cases instead of Blue Wrap:

- Generated less waste, which is more environmentally sound

and provides large cost savings for decreased waste removal

- The hard cases make it easier to track instruments
- The facility does not have to provide dust covers for the hard cases as they do for the Blue Wrapped instruments
- Potential reduction in ergonomic wrapping injuries
- Staff do not have to be taken away from other assignments to assist in wrapping activities
- No damaged wrapped equipment and supplies requiring re-wrapping and re-sterilization
- Improved set preparation time spent wrapping items versus locking the hard case
- In times of emergencies, the facility does not have to depend on delivery of Blue Wrap, but can continue surgeries uninterrupted

Estimated savings

Central Sterile Processing estimated that previous results ranged from 5 to 10 torn packages per week when using Blue Wrap. The cost for re-wrapping and re-sterilizing damaged packages was placed at \$100 per package. The use of hard cases eliminates this problem and conservatively saves an estimated \$26,000 per year (52

Continued on next page

Blue Wrap, continued from page 22

weeks X 5 packages/week
@\$100/package to reprocess).

The reduction of 70 percent usage of Blue Wrap estimated to be achieved by switching to the hard cases amounts to an annual savings of \$25,173.40 using 2006 Blue Wrap purchasing data for Peninsula Medical Center. The \$34,987 spent on purchasing the hard cases would have a return on investment (ROI) based upon the following calculation of:
$$\frac{\$34,987}{(\$26,000 + \$25,173.40)} \times 12 = 8.2 \text{ months.}$$

Additional savings will be achieved in the reduction of 5.07 tons of Blue Wrap from the solid waste stream per year. A specific dollar amount can not be assigned to the solid waste savings because the waste hauler serving Mills-Peninsula Health Services charges for each "pull" of the drop box disposal unit, as opposed to a fee based on the pounds of waste disposed.

It is not uncommon for a disposal fee amounting to \$420 per ton to be charged to hospitals in the Bay Area by their solid waste disposal companies. At that rate, an additional savings of \$2,100 could be anticipated for the reduction of Blue Wrap from the solid waste stream.

What's next?

Mills-Peninsula Health Services' ambulatory care facility in San Mateo includes an outpatient surgery center, which will be

converting to hard cases in early 2008.

Sutter Health's Environmental Risk Team has been working with the California Integrated Waste Management Board to develop new opportunities to recycle Blue Wrap. While recycling is a positive environmental improvement step, source reduction is an even better action to take. This study found that hard cases provide a successful alternative to using Blue Wrap in Central Sterile Processing. The advantages outlined in this study should be evaluated for implementation at other Sutter Health affiliates.

Contact information

For more information on Mills-Peninsula Health Services' switch to hard cases from Blue Wrap and the new opportunities they have found to recycle Blue Wrap, contact Gail Lee at (650) 696-5717 or LeeG1@sutterhealth.org.

St. Joseph's Medical Center—Blue Wrap recycling

St. Joseph's Medical Center in Stockton started recycling Blue Wrap in July 2006. In the 2006 fiscal year, the medical center recycled 5,595 pounds of Blue Wrap. So far in 2007, approximately 466 pounds of Blue Wrap is being recycled per month. St. Joseph's does not receive a rebate on recycling Blue Wrap, because a recycler provides the

Continued on page 24

Blue Wrap, continued from page 23

service of gathering and baling Blue Wrap for St Joseph's.

The used Blue Wrap is stored in one of the 96-gallon containers provided by a recycler. The containers are kept in the sterile area right outside the operating rooms. (See photo below.) A recycler picks up the Blue Wrap once a week along with some other recyclables and bales the wrap at their facility for shipment to a plastics recycler for processing.



St. Joseph employee storing Blue Wrap in container.

Photo in the article appears courtesy of Natalie Pettis.

St. Joseph's has found that by recycling Blue Wrap there is a cost savings and a great environmental benefit. In addition to helping eliminate Blue Wrap waste and promote cost savings, St. Joseph's uses blue cloth wraps to wrap surgical gowns, towels, and most surgical trays. The cloth wraps can be laundered and reused many times.

Awards received

St. Joseph's has received the following awards:

- 2006 H2E Environmental Leadership Award and Making Medicine Mercury Free Award. This included a special mention by the City of Stockton Solid Waste Management Department stating that St. Joseph's is one of Stockton's business community leaders in recycling. Blue Wrap was a part of the recycling program when the award and mention was given.
- 2007 H2E Sustained Environmental Leadership Award for their recycling program. Blue Wrap recycling was part of the recycling program when St. Joseph's received the award. Information on the Environmental Leadership Awards is available at <http://cms.h2e-online.org/awards/overview/#ela>.
- 2006 Green Award from Catholic Healthcare West (CHW) for being a leader within the CHW system for implementing and maintaining consistent, comprehensive recycling programs. This is an internal award issued to one of the 42 hospitals within CHW.
- 2006 WRAP Award from the California Integrated Waste Management Board for their recycling and reuse program.

Continued on next page

Blue Wrap, continued from page 24

For more information on the award, go to www.ciwmb.ca.gov/WRAP/search.asp?VW=APP&BIZID=5607&YEAR=2006&CNTY

Contact information

For more information on St. Joseph's Blue Wrap recycling program, contact John Kendle, Director of Operations, Support Services, St. Joseph's Medical Center at (209) 467-6471 or John.Kendle@CHW.edu.

St. Mary's Medical Center Blue Wrap recovery program

St. Mary's Medical Center in San Francisco conducted a Blue Wrap recovery pilot study from March to June 2003. The "St. Mary's Model" pilot study was a cooperative program between major manufacturers of sterilization Blue Wrap, the primary consumer (medical centers/hospitals), and the secondary manufacturer (who turn material into reusable products) in order to accomplish a post-consumer plastics recovery and reutilization program at the medical center. Due to the success of the pilot study, the recovery of Blue Wrap is ongoing at St. Mary's Medical Center.

St. Mary's Blue Wrap recovery program

Preliminary surveys indicate that Blue Wrap represents at least twenty percent of all the waste created in the surgical arena. Its successful recovery significantly reduces the volume of solid or

regulated medical waste generated by the hospital. In fact, a twenty percent reduction in the volume of Blue Wrap waste from the hospital operating rooms and surgical suites was demonstrated during the pilot study.

One of the most important elements of the recovery effort is that there is a short window of time in the surgical suite. If Blue Wrap remains sterile and stays in a sterile field, its initial recovery can be easily accomplished without additional labor and risk of contamination.

One of the characteristics that make the recovery program unique is the special system and dedicated personnel. Since the recovery of Blue Wrap is initiated prior to its classification as waste, and every element of its recovery (internal transport and on-site storage) are all held completely separate from the hospitals' various waste streams, the Blue Wrap Recovery Program is clearly a multi-departmental program.

The internal transport portion of the recovery program is described as the "Reverse Delivery" of sterilized Blue Wrap. The same highly-trained professionals who deliver it to the operating room or surgical suite transport it to the on-site storage area.

The condensed and packaged Blue Wrap is held in a secured on-site storage area until it is picked up by a major distributor who backhauls the material to its distribution

Continued on page 26

Blue Wrap, continued from page 25

center. The Blue Wrap is then picked up by CleanSource, an Environmental Services (EVS) supply vendor. CleanSource forwards the material to other companies for processing into reusable materials, such as composite lumber that is used for decks, docks, and housing.

Who benefits from St. Mary's Blue Wrap recovery program?

Blue Wrap manufacturers benefit by receiving the accolades and positive press for participating in a recovery and re-use program for one of their premier medical products.

St. Mary's Medical Center benefits by being compliant with State regulations, reducing waste disposal, and supporting their mission to be good stewards of the environment.

Secondary manufacturers benefit by having a predictable, constant, and reliable supply of low-cost, high-grade, super-clean, polypropylene, secondary-resource material.

The environment benefits by our mutual work to conserve

energy, preserve forests and habitat, and by not land-filling unnecessarily.

What awards have St. Mary's received?

St. Mary's Medical Center won an "H2E Partner for Change" award in 2004 for their Blue Wrap Recovery Program. For more information about H2E and H2E awards, visit <http://cms.h2e-online.org/about/>

Where can I get more information?

For more information about the Blue Wrap Recovery Program at St. Mary's Medical Center, contact Dan Christy at (415) 750-4889 or dchristy@chw.edu.

Contact information

In addition to contacting the individual medical centers for more information on their Blue Wrap recycling programs, please contact Melissa Vargas of the California Integrated Waste Management Board at (916) 341-6271 or mvargas@ciwmb.ca.gov.

Nothing in the article is intended to be an endorsement of a particular company or process by the CIWMB.

Asphalt recycling

San Francisco's Department of Public Works (DPW) Bureau of Street & Sewer Repair recently demonstrated a portable asphalt recycling machine (asphalt recycler) that the city is considering for purchase. (See

photo on page 27.) DPW sees the acquisition of an asphalt recycler as a way to support its efforts in cost-efficiency and environmentally-friendly work practices

Continued on next page

Asphalt recycling, continued from page 26



Portable Asphalt Recycling Machine

Photo in the article appears courtesy of Christine Falvey.

San Francisco has been researching ways to fill potholes and patch paved streets while decreasing the amount of construction debris that goes to the landfill. Currently, 15 percent of asphalt taken from these streets is recycled. A proposed goal is to increase asphalt recycling to a minimum of 30 percent, which would equate to an approximate savings of eight to twelve tons of asphalt per day otherwise sent to

the landfill. San Francisco is currently in the specification process to purchase its own asphalt recycler. The asphalt recycler being considered by the city produces recycled asphalt at a cost of \$15 to \$20 per ton. Currently, DPW produces asphalt at a market-rate cost of \$70 to \$85 per ton for paving work. In addition, the materials used in the asphalt recycler being considered are 100 percent recycled material.

For more information on San Francisco's recent asphalt recycling demonstration, contact Larry Stringer, San Francisco's Department of Public Works, at Larry.Stringer@sfdpw.org 415) 695-2090.

Nothing in the article is intended to be an endorsement of a particular company or process by the CIWMB.

Editor's note

I hope you enjoyed this edition of *infoCycling*. Please contact me with suggestions on articles you would like to see included in *infoCycling*. You can e-mail me at twebb@ciwmb.ca.gov or reach me at (916) 341-6240. Your comments and suggestions on *infoCycling* are always welcome!

Tracy